

Make your own lighthouse

Follow this step by step guide on how to make your own model lighthouse.

What you'll need

Components and materials:

- Bulb
- Bulb holder
- 3 crocodile leads
- Toggle switch
- AA zinc chloride cell (**do not use alkaline or rechargeable cells** - if you accidentally short circuit your battery these will get hot)
- Battery holder
- 2 card wheels
- Circular plastic food container with lid e.g. pâté pot
- Small transparent plastic shot glass (a translucent lid off a shampoo bottle or similar would also work)
- Blue cardboard tube
- A4 sheet of white paper

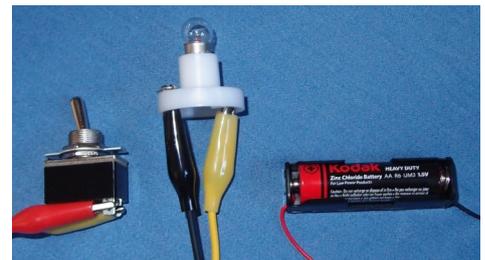
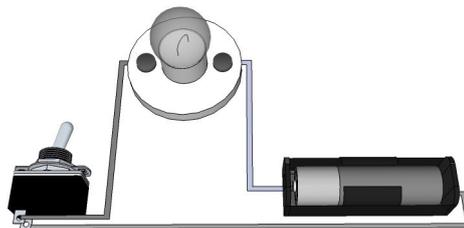
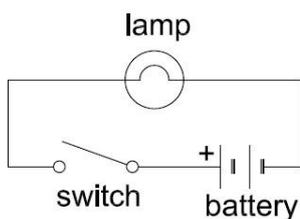
Tools:

- Large scissors
- Pointed nail scissors
- Transparent sticky tape
- Low melt temperature glue gun (if you don't have a glue gun you can use double sided foam sticky tape)



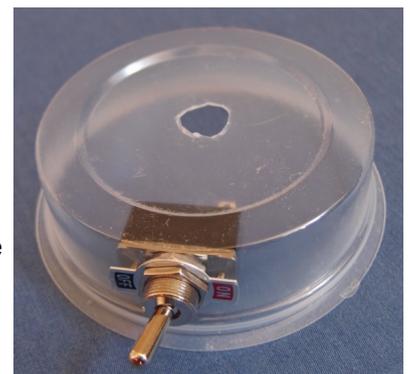
Step 1.

Make this circuit and check that the light comes on when you switch on. Be careful not to short circuit your battery (i.e. connect the wires from your battery directly together) - they must go via the lamp. Switch off. (photo)



Step 2.

Take the lid off the plastic pot and turn it over. Use the nail scissors to make a round hole in the middle about 1 cm in diameter (big enough for the crocodile leads to go through). Make another hole in the side just big enough for the part of the switch with the screw thread to go into. To mount the switch, unscrew the nut and remove the on-off label. Push the threaded part of the switch through the hole from inside to outside. Put back the label and screw the nut back on firmly.



Step 3.

Use the large scissors to enlarge the hole in one of the card wheels to at least 1 cm in diameter, so that it is big enough for the crocodile leads to go through. To do this push the nose of the scissors into the hole in the middle and twist the scissors round and round (photo). Trim off the rough edges with the nail scissors. Glue the card wheel to the middle of the upside down pot. Glue the blue cardboard tube onto the wheel.



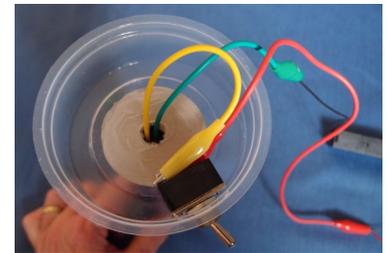
Step 4.

Enlarge the hole in the second card wheel until it just slides onto the bulb holder. Trim the rough edges and glue it onto the top of the screws. Glue the shot glass upside down onto the top of the card circle.



Step 5.

Turn the plastic pot and tube assembly upside down. Use one crocodile lead to attach from the battery holder to the switch. Attach the second crocodile lead to the second switch contact, and the third crocodile lead to the second battery lead. Feed the two loose ends down through the tube until they are sticking out the other end.



Step 6.

Clip the crocodiles onto the screws in the bottom of the bulb holder. Switch on and check the bulb comes on. Glue on the top of the lighthouse. Lay the wires neatly round the inside of the plastic pot without the metal crocodiles touching, place the battery on top and snap on the lid. Try out your lighthouse in a dark room.

